

Appl. No. : 09/945,311
Filed : August 30, 2001

REMARKS

Claims 1-3, 7-14, 16-26, 29-32, 35, and 36 remain pending in the present application, Claims 1-3, 13, 18, 22, and 35 having been amended, and Claims 4-6 having been canceled without prejudice or disclaimer.

In response to the Office Action mailed November 24, 2004, Applicant respectfully requests the Examiner to reconsider the above-captioned application in view of the foregoing amendments and the following comments.

All Pending Claims Fully Comply With 35 U.S.C. § 112

Claim 35 stands rejected under 35 U.S.C. § 112 second paragraph, the Examiner maintaining that the language therein is indefinite. In response, Applicant has amended Claim 35 as suggested by the Examiner. Thus, the present rejection is now moot. However, Applicant submits that this is not a narrowing amendment. Rather, Applicant has merely changed phrasing of the use of the term “or” to allow a reader to more easily read the claims, and thus equivalents of the originally recited phrases are also equivalents of the now-recited phrases. Additionally, Applicant submits that Claim 35 is now in condition for allowance in accordance with the Examiner’s comments set forth at page 12 of the outstanding Office Action.

The Applied Combination of Tzanev/Bohn Does Not Make Obvious The Motorcycle Recited By Claims 1 or 2

Claims 1 and 2 stand rejected under 35 U.S.C. § 103(a) as being obvious over Tzanev in view of Bohn. Applicant respectfully traverses the present rejection. However, in order to expedite prosecution of the present application, Applicant has amended Claim 1. Applicant also expressly reserves the right to further prosecute the original versions of Claims 1 and 2 through continuation practice.

Tzanev teaches a motorcycle having an accelerometer that is used to determine when a turn has been completed for purposes of canceling a turn signal, i.e., a “blinker”. Additionally, Tzanev teaches that the same accelerometer can be used to determine if a tip-over, from a *static* position, is about to occur and using a control system to *shut off* the motor if a tip over is detected. Tzanev, however, fails to teach a motorcycle that decreases a power output of its motor based on a measurement of the leaning angle *during turning*.

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With regard to the Tzanev system for turn signal control, Tzanev teaches:

The voltage output of the accelerometer 40 may be used to determine when the vehicle has **begun and completed a turn**. As should be evident from the discussion above, when the vehicle **begins a turn**, lateral forces act upon the accelerometer causing it to **generate an output** of a predetermined amount. As the vehicle turns back to an upright position at the **end of the turn**, lateral forces act upon the accelerometer causing it to **generate another output** of another predetermined amount. If the outputs, which are preferably digital and measured in A/D counts, occur over a certain period of time, the movement is considered to be a turn by the processor 12.

Tzanev, col. 5, ll 47-58 (emphasis added).

Additionally, Tzanev notes that:

“Of course, centrifugal forces acting on the vehicle **while it is in motion** tend to counter act the gravitational forces acting on the vehicle. Thus, in steady state motion (such as when traveling around a curve at a constant speed) the output of the accelerator is **zero or nearly zero**.”

Tzanev, col. 5, ll. 3-6 (emphasis added).

Thus, reading these two passages together, it is clear that during the operation of the motorcycle through a turn, the accelerometer of Tzanev outputs signals as follows:

- 1) Before the turn, the output signal of the accelerometer 40 is zero, indicating no leaning.
- 2) At the beginning of the turn, as the leaning angle of the motorcycle changes, the output of the accelerometer changes, thereby generating an “output of a predetermined amount.” Tzanev, col. 5, ll 47-58 (emphasis added)
- 3) In the middle of the turn, when the motorcycle achieves “steady state motion (such as when traveling around a curve at a constant speed) the output of the accelerator is **zero or nearly zero**.” Tzanev, col. 5, ll. 5-6 (emphasis added). As such, the accelerometer does not generate a signal that is in proportion to the leaning angle, i.e., the output returns to zero even when a constant leaning angle is maintained.
- 4) At the end of the turn, while the leaning angle of the motorcycle changes again, the accelerometer outputs another signal. Tzanev, col. 5, ll 47-58.
- 5) The two signals generated at the beginning of the turn and at the end of the turn, respectively, are used to determine if a turn has been completed.

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Thus, Tzanev fails to teach a lean angle sensor for a motorcycle that can output a signal that is in proportion to a *leaning angle* of the motorcycle *during a turn*. Rather, the accelerometer 40 of Tzanev only outputs a signal at the beginning and ending of turns, as noted above. During a turn with constant velocity and leaning angle, the output signal of the accelerometer 40 is **zero or nearly zero.**” Tzanev, col. 5, ll. 5-6 (emphasis added).

Bohn teaches a motorcycle that has one sensor sensing rearward-forward accelerations and one sensor for detecting vertical accelerations. However, nothing in Bohn teaches decreasing the power output of the engine when an excessive lean angle is detected *during turning*.

In contrast, Claim 1 now recites, among other recitations, “an accelerometer being mounted within the outer housing and electrically communicating with the control unit, the accelerometer being adapted to output an output signal that varies with a proportional relation to a leaning angle of the motorcycle when turning, said control unit adapted to compare said output signal to a threshold signal range, said control unit further adapted to decrease the output of said motive member if said output signal is outside said threshold signal range.”

As used herein, the term “proportional relation” is intended to encompass any repeatable relationship between leaning angle and output signal. Many different examples of proportional relationships are mentioned in the specification. One non-limiting example is disclosed in Figures 3-4, and the accompanying text.

Applicants submit that the term “proportional relationship” is only meant to convey that the value of the output signal changes with changes in leaning angle, whether the relationship is linear or non-linear. For example, the term “proportional relationship” encompasses relationships where incremental increases in a leaning angle of the motorcycle create incremental increases (or decreases) in output signal value, unlike the output signal of the accelerometer of Tzanev.

Because Tzanev fails to teach a system that can provide such an output signal characteristic for a motorcycle, no obvious combination of the Tzanev and Bohn references would result in a motorcycle having any sensor arrangement that outputs a signal that proportionally varies with a leaning angle *during turning* and a controller that decreases a power

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output of the engine when that signal rises or falls below a threshold *during turning*. Applicant thus submits that Claim 1 clearly and non-obviously defines over the cited art.

Additionally, Applicant submits that Claim 2 also defines over the cited references, not only because it depends from Claim 1, but also on its own merit.

The Applied Combination of Tzanev/Bohn/Schiffmann Does Not Make Obvious The Motorcycle Recited By Claim 3

Claim 3 stands rejected under 35 U.S.C. § 103(a) as being obvious over Tzanev in view of Bohn and in further view of Schiffmann. Applicant respectfully traverses the present rejection. However, in order to expedite prosecution of the present application, Applicant has amended Claim 1 which defines over the Tzanev/Bohn combination as noted above. Applicant submits that Claim 3 also defies over the cited references, not only because is depends from Claim 1, but also on its own merit. Applicant also expressly reserves the right to further prosecute the original version of Claim 3 through continuation practice.

The Applied Combination of Blosch/Fritz Does Not Make Obvious The Wheeled Vehicle Recited By Claim 4 or 5

Claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being obvious over Blosch in view of Fritz. Applicant respectfully traverses the present rejection. However, in order to expedite prosecution of the present application, Applicant has canceled Claims 4 and 5 without prejudice or disclaimer. Thus, the present rejection is now moot. Applicant also expressly reserves the right to further prosecute the original version of Claims 4 and 5 through continuation practice.

The Applied Combination of Blosch/Fritz/Carson et al. Does Not Make Obvious The Wheeled Vehicle Recited By Claim 6

Claim 6 stands rejected under 35 U.S.C. § 103(a) as being obvious over Blosch in view of Fritz and Carson et al. Applicant respectfully traverses the present rejection. However, in order to expedite prosecution of the present application, Applicant has canceled Claim 6 without prejudice or disclaimer. Thus, the present rejection is now moot. Applicant also expressly reserves the right to further prosecute the original version of Claim 6 through continuation practice.

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The Applied Combination of Sasaki/Saito/Bohn Does Not Make Obvious The Vehicle Recited By Claims 13, 20, or 21

Claims 13, 20, and 21 stand rejected under 35 U.S.C. § 103(a) as being obvious over Sasaki in view Saito et al. and in further view of Bohn and Tzanev. Applicant respectfully traverses the present rejection. However, in order to expedite prosecution of the present application, Applicant has amended Claim 13. Applicant also expressly reserves the right to further prosecute the original versions of Claims 13, 14, and 16-24.

Firstly, Applicants would like to point out that Claim 13 now recites, among other recitations “A method of controlling operations of a **motorcycle** during an accident. . . said method comprising sensing an output signal from said accelerometer which varies in accordance with a proportional relationship to a leaning angle of the motorcycle during turning, comparing said output signal with a preset threshold level, if said output signal exceeds said preset threshold level then disabling said motive member”

As noted above with reference to the rejection of Claim 1, Nothing in the Tzanev and Bohn references teach an accelerometer system for a motorcycle that can generate a signal in a proportional relationship to a leaning angle of the motorcycle during turning. Nothing in the Sasaki or Saito et al. references rectifies this failure.

Applicant thus submits that Claim 13 clearly and non-obviously defines over the cited references. Additionally, Applicant submits that Claims 14 and 16-24 also define over the cited references, not only because they depend from Claim 13, but also on their own merit.

The Applied Combination of Sasaki/Saito et al./Bohn/Tzanev Does Not Make Obvious The Method Recited By Claims 14, 16, and 17

Claims 14, 16, and 17 stand rejected under 35 U.S.C. § 103(a) as being obvious over Sasaki in view of Sasaki, Saito et al., Bohn, and Tzanev. Applicant respectfully traverses the present rejection. However, in order to expedite prosecution of the present application, Applicant has amended Claim 13 which defines over the Sasaki/Saito et al./Bohn/Tzanev combination as noted above. Applicant submits that Claims 14, 16, and 17 also define over the cited references, not only because they depend from Claim 13, but also on their own merit. Applicant also expressly reserves

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the right to further prosecute the original version of Claims 14, 16, and 17 through continuation practice.

The Applied Combination of Sasaki/Saito et al./Bohn/Tzanev/Reginold/Carson et al. Does Not Make Obvious The Method Recited By Claims 18 and 19

Claims 18 and 19 stand rejected under 35 U.S.C. § 103(a) as being obvious over Sasaki in view of Sasaki, Saito et al., Bohn, Tzanev, Reginold, and Carson et al. Applicant respectfully traverses the present rejection. However, in order to expedite prosecution of the present application, Applicant has amended Claim 13 which defines over the Sasaki/Saito et al./Bohn/Tzanev combination as noted above. Applicant submits that Claims 18 and 19 also define over the cited references, not only because they depend from Claim 13, but also on their own merit. Applicant also expressly reserves the right to further prosecute the original version of Claims 18 and 19 through continuation practice.

The Applied Combination of Sasaki/Saito et al./Bohn/Tzanev/Schiffmann Does Not Make Obvious The Method Recited By Claims 22-24

Claims 22-24 stand rejected under 35 U.S.C. § 103(a) as being obvious over Sasaki in view of Sasaki, Saito et al., Bohn, Tzanev, and Schiffmann. Applicant respectfully traverses the present rejection. However, in order to expedite prosecution of the present application, Applicant has amended Claim 13 which defines over the Sasaki/Saito et al./Bohn/Tzanev combination as noted above. Applicant submits that Claims 22-24 also define over the cited references, not only because they depend from Claim 13, but also on their own merit. Applicant also expressly reserves the right to further prosecute the original version of Claims 22-24 through continuation practice.

CONCLUSION

For the foregoing reasons, it is respectfully submitted that the rejections set forth in the outstanding Office Action are inapplicable to the present claims. Accordingly, early issuance of a Notice of Allowance is most earnestly solicited.

The undersigned has made a good faith effort to respond to all of the rejections in the case and to place the claims in condition for immediate allowance. Nevertheless, if any undeveloped issues remain or if any issues require clarification, the Examiner is respectfully requested to call

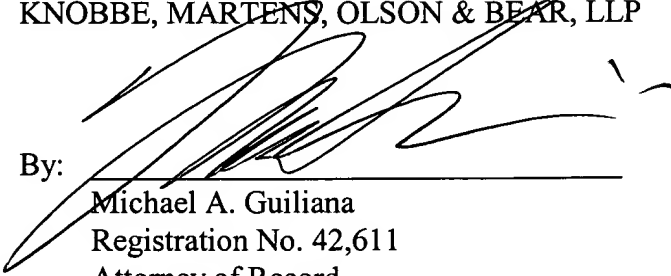
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Applicant's attorney, Michael A. Guiliana at (949) 721-6384 (direct line), in order to resolve such issue promptly.

Respectfully submitted,

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